Claims

We claim:

1. An apparatus for preventing spilling during drinking, said apparatus comprising:

a valve, said valve comprising a protruding member and an opening, said valve having a closed position and in an open position,

said closed position being a configuration in which said protruding member extends through said opening to block the passage of liquid through said opening,

said open position being a configuration in which said protruding member and said opening are further separated than in said closed position to allow the passage of liquid through said opening.

2. An apparatus as claimed in Claim 1, wherein said protruding member is at least partially tapered, said opening is located within a flexible valve member, and said valve member begins to invert upon the application of negative pressure to said valve member, to rise off of said tapered protruding member.

3. An apparatus as claimed in Claim 1, wherein said apparatus comprises a cap for a cup.

4. An apparatus as claimed in Claim 1, wherein said apparatus comprises a drinking cup.

5. An apparatus as claimed in Claim 1, wherein said apparatus comprises a valve assembly.

6. An apparatus for preventing spilling during drinking, said apparatus comprising:

a valve, said valve comprising a protruding member and a valve member, said valve member comprising an opening, said valve having a closed position and in an open position,

said closed position being a configuration in which said protruding member extends through said opening of said valve member to block the passage of liquid through said opening,

said valve further being movable into an open position in which said valve member is pulled away from said protruding member for the passage of liquid through said opening,

said valve moving from said closed position to said open position upon the application of negative pressure to said valve member.

7. An apparatus as claimed in Claim 6, wherein said apparatus comprises a cap for a cup.

8. An apparatus as claimed in Claim 6, wherein said apparatus comprises a drinking cup.

9. An apparatus as claimed in Claim 6, wherein said apparatus comprises a valve assembly.

10. An apparatus as claimed in Claim 6, wherein said apparatus comprises a valve assembly and a cap, said valve being a part of said valve assembly, said valve assembly and cap being configured such that said valve assembly can be attached to said cap.

11. An apparatus as claimed in Claim 6, further comprising a sealing member, said sealing member comprising said protruding member and a base, said protruding member being attached to said base.

12. An apparatus as claimed in Claim 11, wherein said base is approximately flat.

13. An apparatus as claimed in Claim 11, wherein said protruding member is a post.

14. An apparatus as claimed in Claim 11, wherein said protruding member is conical.

15. An apparatus as claimed in Claim 11, wherein at least a portion of said post is tapered.

16. A no spill drinking apparatus, comprising:

a valve, said valve comprising a sealing member and a flexible valve member, said sealing member comprising a protruding member and a base, said valve member comprising an opening therein;

said valve having a closed position and an open position, said closed position being a configuration in which said valve member rests proximal to said base with said protruding member extending through said opening to block the passage of liquid through said opening;

said valve further being movable into an open position, said open position being a position in which said valve member is distal to said base, with said opening at least partially unblocked, to allow the passage of liquid through said valve.

17. An apparatus as claimed in Claim 16, wherein said valve rests in said closed position, and begins to invert upon the application of negative pressure to said valve member, to move from said closed position to said open position.

18. A no spill drinking apparatus, comprising:

a valve, said valve comprising a sealing member and a valve member, said sealing member comprising a protruding member and a base, said valve member comprising a substantially circular opening therein, said protruding member having an upper portion and a lower portion, said upper portion being of smaller diameter than said lower portion;

said valve having a closed position and in an open position, said closed position being a configuration in which said valve member rests proximal to said base with said protruding member extending through said opening to block the passage of liquid through said opening;

said valve moving into an open position upon the application of negative pressure to said opening by the mouth of a user for the purpose of drinking out of said apparatus, said open position being a position in which said valve member moves distal to said base to separate away from said opening, such that said opening is at least partially unblocked to allow the passage of liquid through said opening and said valve.

19. An apparatus as claimed in Claim 18, wherein said apparatus comprises a cap for a cup.

20. An apparatus as claimed in Claim 18, wherein said apparatus comprises a drinking cup.

21. An apparatus as claimed in Claim 18, wherein said apparatus comprises a valve assembly.

22. An apparatus as claimed in Claim 18, wherein said protruding member is tapered.

23. An apparatus as claimed in Claim 18, wherein at least a portion of said protruding member is tapered at an angle of seven (7) degrees.

24. An apparatus as claimed in Claim 18, wherein at least a portion of said protruding member is tapered at an angle of nine (9) degrees.

25. An apparatus as claimed in Claim 18, wherein said protruding member extends through and beyond said opening in said closed position.

26. An apparatus as claimed in Claim 18, wherein said apparatus further comprises an anti-inversion member, said anti-inversion member being placed at a sufficiently close distance to such valve member such that such valve member will hit said anti-inversion member and be blocked from further inversion before said valve member fully inverts.

27. An apparatus as claimed in Claim 18, wherein said valve member comprises a flexible material.